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Multiple sclerosis

Oral communications

CO26-002-e

Epidemiology of self-reported multiple sclerosis in the French adult population: A transversal study



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Objectives In France, the epidemiology of multiple sclerosis and its functional consequences are little known. This study aims to describe prevalence and consequences of MS in the French Population.

Methods Two large population-based surveys “Disability health household” and “Disability health institutions” interviewed individuals living in France. Information about medical conditions, impairments, disabilities, and participation restriction was collected. Participants reporting multiple sclerosis as medical condition were specifically analyzed. Through sampling and weighted analysis of 33,896 structured interviews, 49,028,826 individuals living in France were represented.

Results The study showed a prevalence of self-reported MS of 211.8/100,000 (CI95% 157.5–266.1). The sex ratio was 2.91 (CI95% 1.85–4.57) women for one man. A north/south gradient did not appear. Mean age was 52 years (SD 1.37). Participants who declared MS reported fatigue for 86.8% (IC95% 79.8–95.8), mobility impairments for 75.9% (IC95% 65.8–86.1) and balance disorders for 65.6% (IC95% 54.6–76.7). Rates were respectively 44.9% (IC95% 44–45.9), 11% (IC95% 10.6–11.5) and 6.4% (IC95% 6.1–6.7) for subjects who did not report MS. Regarding difficulties in carrying out activities of daily living, 24.8% of MS subjects were dependant for washing, 17.3% for transfers, 12% for continence and 7.3% for feeding. 68.9% of subjects had an EDSS score below or equal to 4 and 7.9% higher or equal to 7.5.

Discussion Our study showed a higher prevalence of multiple sclerosis in France than previous French estimations did (between 60 and 142/100,000). Recent studies completed in other European countries resulted in similar results. This strengthens the hypothesis that prevalence of MS has increased. Improvements in diagnosis of MS and the declarative method of the survey might

partly explain this higher prevalence figure. However, further studies would be required to document and explain the increased prevalence of this pathology, which has heavy functional consequences.

Keywords Multiple sclerosis; Epidemiology; Prevalence; Impairment; Disability

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Effect of dalfamprine on spatiotemporal gait parameters in multiple sclerosis



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Objective Improvement of spatiotemporal gait parameters with dalfampridine.

Method Retrospective study of data collected prospectively in patients with multiple sclerosis treated by dalfampridine for gait disorders. Spatiotemporal gait parameters [1] were measured using a locometer at spontaneous and supported velocity after the establishment of dalfampridine and after 14 days of treatment. In addition, a clinical examination and Time 25 Foot Walk Test (T25FW) were executed.

Results Two hundred patients with dalfampridine were evaluated between April 2013 and September 2014. Eighty-six patients had exploitable gait analysis (age: 53.3 ± 9.5; median EDSS: 5.5 [max: 6.5; min: 4]). Forty-one (47.6%) were classified as responders (R) to the dalfampridine after improving their T25FWT of over 20% and 45 (52.3%) as non-responders (NR). The dalfampridine improved the spontaneous and supported walking velocity in the 2 groups ($P < 0.05$). The cadence and stride length improved in the 2 groups independently of the velocity ($P < 0.05$). On D14, the NR became asymmetrical ($P < 0.001$) in spontaneous velocity. There was an inverse correlation between spontaneous walking velocity to D0 and the % of improvement T25FWT ($r = -0.524$; $P < 0.0001$).

Discussion Dalfampridine improves some spatiotemporal gait parameters in R as in NR but NR become asymmetrical at spontaneous velocity. The lack of improvement in voluntary motor function could explain this asymmetry. Spontaneous walking speed measured with locometer could be a predictive factor of response to dalfampridine.

Keywords Dalfampridine; Spatiotemporal gait parameters; Gait analysis; Multiple sclerosis